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United States
Department of
Agriculture

Natural
Resources
Conservation
Service



Idaho

Basin Outlook Report

February 1, 1996



Basin Outlook Reports

and Federal - State - Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

Your local Natural Resources Conservation Service Office

or

Natural Resources Conservation Service

Snow Surveys

3244 Elder Street, Room 124

Boise, ID 83705-4711

(208) 378-5740

How forecasts are made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Natural Resources Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

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IDAHO WATER SUPPLY OUTLOOK REPORT

FEBRUARY 1, 1996

SUMMARY

What a difference a couple of weeks can make! Heavy snowfall during the last two weeks of January has improved mountain snowpacks statewide, with most areas now reporting near or above average conditions. Streamflow forecasts have improved as well, calling for normal or better runoff for most streams. Combine these forecasts with the excellent carry over storage in Idaho's major reservoirs, and the prospects look good for abundant water supplies this year.

SNOWPACK

Heavy snow fell on the entire state during the last two weeks of January as winter weather finally came to Idaho. All basins received above average snowfall during January, with the southern edge of the state receiving the most benefit (160-180% of average for the month). The Panhandle is the only part of the state still reporting below average snowpacks (80% of average). The colder weather during January brought snow to the lower elevations for the first time this winter; blowing and drifting snow caused transportation problems in many parts of the state. The higher elevations statewide continue to report above average snowpacks.

PRECIPITATION

Even though January started off dry, the last two weeks of the month more than made up for the slow start. The entire state received above normal precipitation during January, with cooler temperatures bringing snow to all but the lowest elevations. The heaviest precipitation was along the southern edge of the state where 160-180% of average was received. The "driest" part of the state was the Panhandle, where 116% of average precipitation fell in the mountains. Water year to date precipitation is above average everywhere, thanks in part to the heavy moisture received in the fall.

RESERVOIRS

Good news here... all major reservoirs in the state continue to report above average storage except Bear Lake which has yet to recover from the recent string of drought years. The upper Snake is currently storing 127% of normal for this time of year; the system is already 87% full. The Payette basin is reporting 145% of normal storage (82% of capacity). Reservoirs in the Boise basin are 117% of normal or 72% full. These high storage values, combined with above normal streamflow forecasts, promise an interesting balancing act this spring between flood control and storage requirements.

Note: NRCS reports reservoir information in terms of usable volumes, which includes both active, inactive, and in some cases dead storage. Other operators may report reservoir contents in different terms. For additional information, see the reservoir definitions in the back of this report.

STREAMFLOW

Heavy snowfall during January has boosted streamflow forecasts statewide. Most notably, streams on the south side of the Snake report a 15 to 40 percentage point jump over last month's outlook. Forecasts currently range from 90 to 100% of average in the Panhandle, 115 to 130% in the central mountains, and 95 to 115% along the southern edge of the state. Prospects are particularly encouraging for the upper Snake, where forecasts call for 105 to 130% of average runoff. With more than half of the winter behind us, the prospect for abundant water supplies this year looks very good.

RECREATION OUTLOOK

Heavy snowfall during the last half of January has been a blessing to skiers and snowmobilers alike, and has improved the prospects for summer water based recreation as well. The entire state received above normal snowfall during the month. The snow was especially generous to Idaho's southern desert rivers, where the Owyhee, Jarbidge, and Bruneau basins now report above average snowpack conditions. This is a dramatic change from last month, when the Owyhee basin reported only 40% of average snowpack. Prospects now look encouraging for a good river running season in the desert southwest. The outlook has also improved in northern Idaho, where slightly below normal runoff is expected. Central Idaho streams and the upper Snake river should have plenty of water, with the potential for high flows in the spring and full reservoirs well into the summer. If the current wet trend continues, this year could be a repeat of last year's excellent water based recreation season.

WATER SUPPLY FORECASTING PRODUCTS ON THE INTERNET

On February 1, the Water and Climate Center (WCC) began providing Snow Survey and Water Supply Forecasting products on the INTERNET. A few of our more popular products (SNOTEL Update Reports, State Basin Outlook Reports, and products previously published in the Water Supply Outlook for the Western United States) are now accessible via our new Home Page and our Anonymous FTP server.

The Universal Resource Locator (URL) for the home page is: <http://www.wcc.nrcs.usda.gov/>
The address for the Anonymous FTP server is: [ftp.wcc.nrcs.usda.gov](ftp://ftp.wcc.nrcs.usda.gov)
You can access the Anonymous FTP server using your INTERNET browser (Netscape, Mosaic, etc.) by changing the URL to: <ftp://ftp.wcc.nrcs.usda.gov/>

We will continue to add more products to the Home Page and Anonymous FTP server and welcome any comments and suggestions you might have. Questions and comments should be directed to the NRCS Snow Survey and Water Supply Forecasting contact in your state or:

Chris Pacheco (503) 414-3056 a16cpacheco@attmail.com

Jim Marron (503) 414-3047 a16jmarron@attmail.com

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Water and Climate Center
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IDAHO SURFACE WATER SUPPLY INDEX (SWSI)

As of February 1, 1996

The surface water supply index (swsi) is predictive indicator of surface water availability within a watershed for the spring and summer water use season. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow. SWSI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry), with a value of zero indicating a median water supply as compared to historical occurrences.

SWSI values are published January through May, and provide a more comprehensive outlook of water availability than either streamflow forecasts or reservoir storage figures alone. The SWSI index allows comparison of water availability between basins for drought or flood severity analysis. Threshold SWSI values have been established for most basins to indicate the potential for agricultural water shortages.

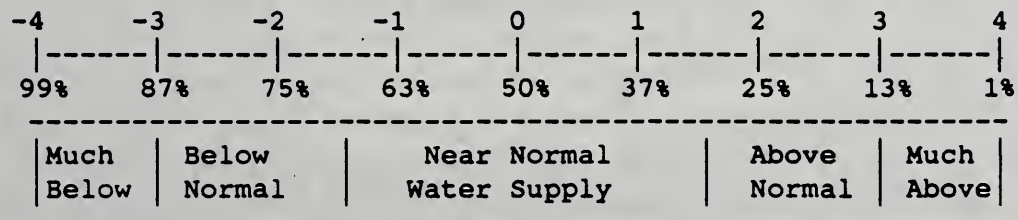
The following agencies and cooperators provide assistance in the preparation of the Surface Water Supply Index for Idaho:

US Department of Commerce, National Weather Service
US Bureau of Reclamation
Idaho Water Users Association

US Army Corps of Engineers
Idaho Department of Water Resources
PacifiCorp

<i>BASIN or REGION</i>	<i>SWSI Value</i>	<i>Most Recent Year With Similar SWSI Value</i>	<i>Agricultural Water Supply Shortage May Occur When SWSI is Less Than</i>
PANHANDLE	-1.2	1978	NA
CLEARWATER	1.8	1993	NA
SALMON	2.6	1978	NA
WEISER	1.1	1978	NA
PAYETTE	2.8	1984	NA
BOISE	1.8	1986	-2.6
BIG WOOD	1.6	1975	-1.4
LITTLE WOOD	0.9	1993	-2.1
BIG LOST	1.0	1980	-0.8
LITTLE LOST	2.4	1983	0.0
HENRYS FORK	1.2	1978	-3.3
SNAKE (AMERICAN FALLS)	2.8	1976	-2.0
OAKLEY	1.4	1978	0.0
SALMON FALLS	2.6	1980	0.0
BRUNEAU	2.1	1993	NA
OWYHEE		1993	NA
BEAR RIVER	-2.5	1989	-3.8

SWSI SCALE, PERCENT CHANCE OF EXCEEDANCE, AND INTERPRETATION









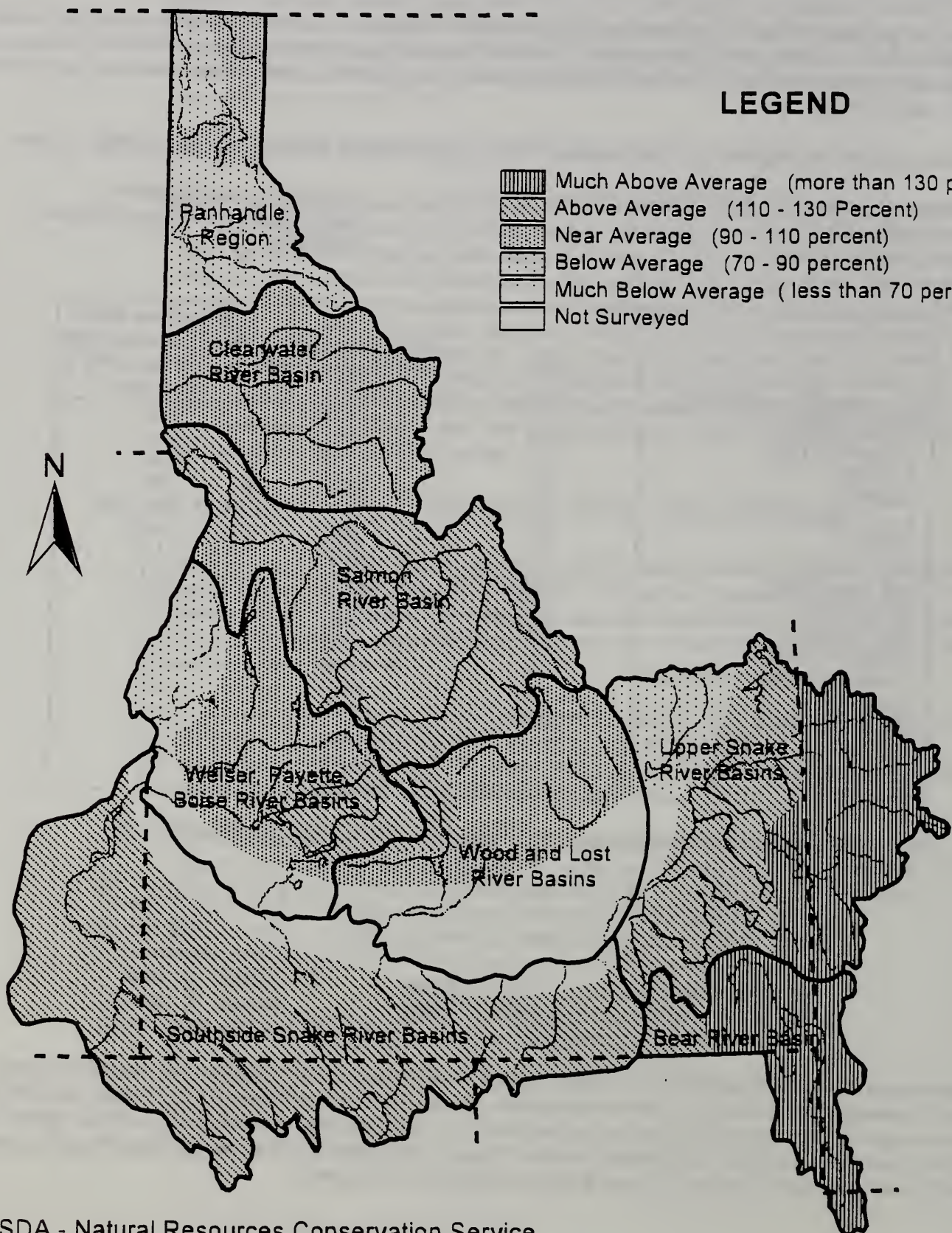
Note: The Percent Chance of Exceedance is an indicator of how often a range of SWSI values might be expected to occur. Each SWSI unit represents about 12% of the historical occurrences. As an example of interpreting the above scale, the SWSI can be expected to be greater than -3.0, 87% of the time and less than -3.0, 13% of the time. Half the time, the SWSI will be below and half the time above a value of zero. The interval between -1.5 and +1.5 described as "Near Normal Water Supply", represents three SWSI units and would be expected to occur about one third (36%) of the time.

Idaho Mountain Snowpack

February 1, 1996

LEGEND

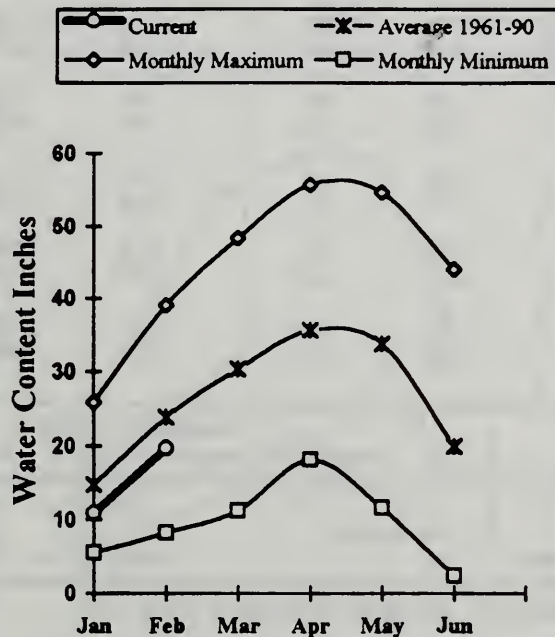
-  Much Above Average (more than 130 percent)
-  Above Average (110 - 130 Percent)
-  Near Average (90 - 110 percent)
-  Below Average (70 - 90 percent)
-  Much Below Average (less than 70 percent)
-  Not Surveyed



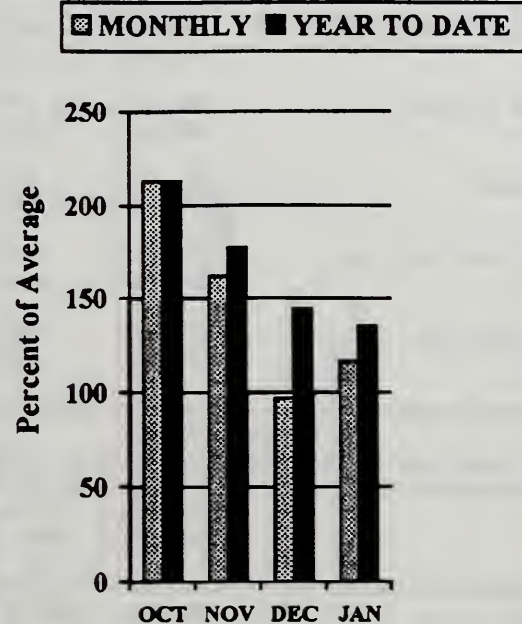
PANHANDLE REGION FEBRUARY 1, 1996



**Mountain Snowpack (inches)
PANHANDLE REGION**



**Mountain Precipitation
PANHANDLE REGION**



WATER SUPPLY OUTLOOK

January snowfall improved snowpack conditions in the Panhandle region, especially in the lower elevation drainages. However, the Panhandle is the only major area in the state still reporting below normal snowpack conditions. January precipitation was 116% of average, keeping the water year total well above average at 135%. Snowpack conditions currently range from 70% of average in the Coeur d'Alene basin to 87% in the St. Joe basin. Storage in the region's lakes and reservoirs remains above average as a result of the heavy rains received last fall. Streamflow forecasts call for 93% of average for the Spokane River. Water supplies should be adequate for most water users in the region.

PANHANDLE REGION
Streamflow Forecasts - February 1, 1996

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		=====		Chance Of Exceeding *		=====		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
KOOTENAI at Leonia (1,2)	APR-JUN	5460	6370	6780	119	7190	8110	5701
	APR-JUL	6951	8085	8600	119	9115	10249	7199
	APR-SEP	7993	9297	9890	120	10483	11787	8275
CLARK FK at Whitehorse Rpds (1,2)	APR-JUN	8729	10745	11660	116	12575	14591	10050
	APR-JUL	10162	12526	13600	116	14674	17038	11730
	APR-SEP	11217	13819	15000	116	16181	18783	12910
PEND OREILLE Lake Inflow (1,2)	APR-JUN	9692	12173	13300	117	14427	16908	11390
	APR-JUL	11578	14206	15400	117	16594	19222	13150
	APR-SEP	12620	15495	16800	117	18105	20980	14370
PRIEST nr Priest River (1,2)	APR-JUL	602	790	875	107	960	1148	814
	APR-SEP	643	844	935	108	1026	1227	868
COEUR D'ALENE at Enaville	APR-JUL	510	629	710	92	791	910	770
	APR-SEP	537	658	740	91	822	943	809
ST.JOE at Calder	APR-JUL	889	1027	1120	96	1213	1351	1169
	APR-SEP	932	1074	1170	95	1266	1408	1237
SPOKANE near Post Falls (2)	APR-JUL	1810	2197	2460	93	2723	3110	2633
	APR-SEP	1891	2283	2550	93	2817	3209	2730
SPOKANE at Long Lake	APR-JUL	2055	2469	2750	94	3031	3445	2936
	APR-SEP	2241	2669	2960	94	3251	3679	3159

PANHANDLE REGION
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage ***		
		This Year	Last Year	Avg
HUNGRY HORSE	3451.0	2820.0	1635.0	2362.0
FLATHEAD LAKE	1791.0	1572.0	962.9	1095.0
NOXON RAPIDS	335.0	324.4	326.5	314.2
PEND OREILLE	1561.3	890.9	605.8	823.1
COEUR D'ALENE	238.5	127.5	116.5	127.8
PRIEST LAKE	119.3	67.0	60.0	53.4

PANHANDLE REGION
Watershed Snowpack Analysis - February 1, 1996

Watershed	Number of Data Sites	This Year as % of	
		Last Yr	Average
Kootenai ab Bonners Ferry	22	113	114
Moyie River	2	124	104
Priest River	4	59	69
Pend Oreille River	69	111	108
Rathdrum Creek	4	36	54
Hayden Lake	0	0	0
Coeur d'Alene River	5	84	72
St. Joe River	2	89	87
Spokane River	11	67	71
Palouse River	1	81	81

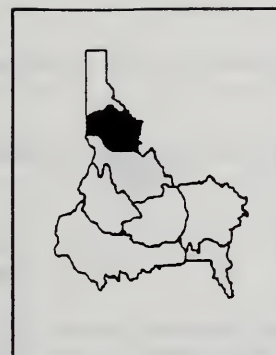
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

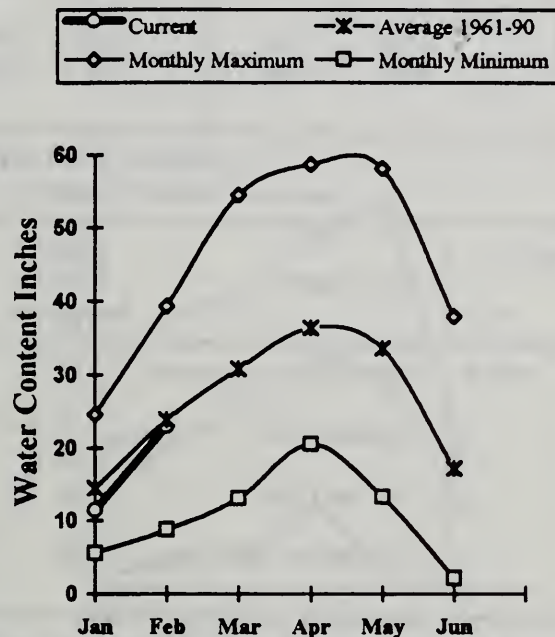
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually .5% and 95% exceedance levels.
 (2) - The value is natural flow - actual flow may be affected by upstream water management.

CLEARWATER RIVER BASIN

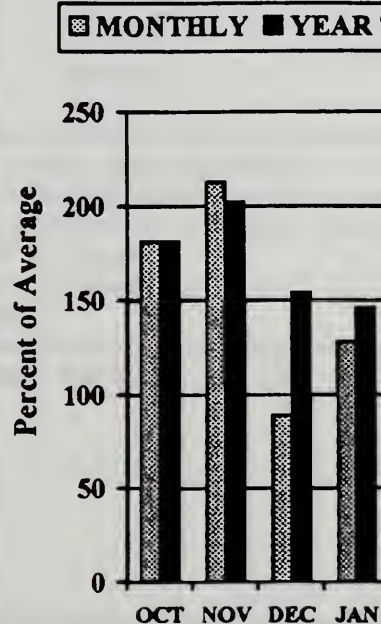
FEBRUARY 1, 1996



**Mountain Snowpack (inches)
CLEARWATER RIVER BASIN**



**Mountain Precipitation
CLEARWATER RIVER BASIN**



WATER SUPPLY OUTLOOK

Cold temperatures and heavy precipitation brought snow across the entire Clearwater basin during January. Most low elevation SNOTEL sites in the basin are now reporting more than double their January 1 snow water content levels. Elk Butte SNOTEL site increased from 6.1 inches of snow water content on January 1 to 20.5 inches on February 1. The higher elevations continue to report the best snowpack conditions. The North Fork Clearwater watershed reports 93% of average snowpack while the higher elevation Selway and Lochsa watersheds are reporting 105% and 101% of average, respectively. The snowpack conditions in the Lochsa and Selway drainages promises an excellent river running season this year. Dworshak Reservoir is currently reporting 78% of capacity. Streamflow forecasts look promising and call for 104% of average for Dworshak Reservoir inflow and 108% for the Clearwater River at Orofino. Water supplies should be adequate for the Clearwater basin in 1996.

CLEARWATER RIVER BASIN
Streamflow Forecasts - February 1, 1996

Forecast Point	Forecast Period	<===== Drier ===== Future Conditions ===== Wetter =====>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
DWORSHAK RESV INFLOW (2)	APR-JUL	1640	2576	2800	104	3024	3930	2692
	APR-SEP	2366	2708	2940	103	3172	3514	2866
CLEARWATER at Orofino (1)	APR-JUL	3349	4560	5110	108	5660	6871	4718
	APR-SEP	3540	4819	5400	109	5981	7260	4976
CLEARWATER at Spalding (1,2)	APR-JUL	5312	7360	8290	109	9220	11268	7618
	APR-SEP	5639	7806	8790	109	9774	11941	8052

CLEARWATER RIVER BASIN Reservoir Storage (1000 AF) - End of January					CLEARWATER RIVER BASIN Watershed Snowpack Analysis - February 1, 1996			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
DWORSHAK	3459.0	2695.5	2026.0	2198.2	North Fork Clearwater	12	98	93
					Lochsa River	4	99	101
					Selway River	5	110	105
					Clearwater Basin Total	20	102	97

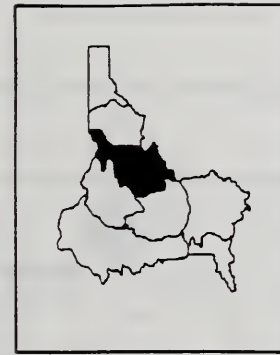
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

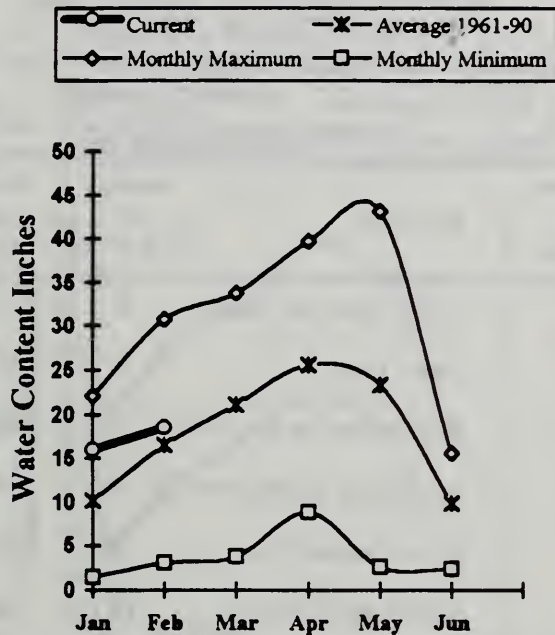
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
 (2) - The value is natural flow - actual flow may be affected by upstream water management.

SALMON RIVER BASIN

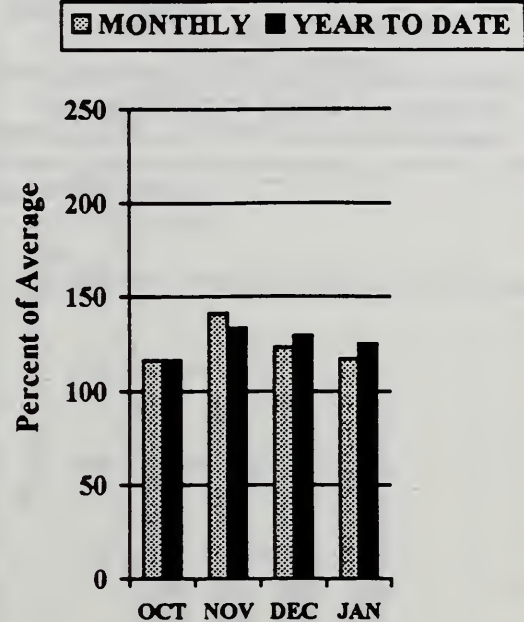
FEBRUARY 1, 1996



Mountain Snowpack (inches)
SALMON RIVER BASIN



Mountain Precipitation
SALMON RIVER BASIN



WATER SUPPLY OUTLOOK

Precipitation in the Salmon river basin has been above average every month since the water year started. January's mountain precipitation was 117% of average, bringing the water year total to 125%. As a result of the heavy snowfall during the second half of January, snowpack percentages increased from last month and now range from 90% of average for the Little Salmon basin to 124% for the Salmon River above Salmon. Streamflow forecasts reflect the above normal snowpack and call for 115% of average for the Salmon River at Salmon and 118% for the Salmon River at White Bird. If the current wet trend continues, the potential exists for high flows this spring. Unless conditions change dramatically over the next few months, water supplies should be excellent for recreational, agricultural and other water uses in the basin.

SALMON RIVER BASIN
Streamflow Forecasts - February 1, 1996

		<===== Drier ===== Future Conditions ===== Wetter =====>						
Forecast Point	Forecast Period	===== Chance Of Exceeding * =====						30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
=====								
SALMON at Salmon (1)	APR-JUL	625	883	1000	115	1117	1375	869
	APR-SEP	730	1033	1170	115	1307	1610	1019
=====								
SALMON at White Bird (1)	APR-JUL	4952	6367	7010	118	7653	9068	5956
	APR-SEP	5489	7058	7770	118	8482	10051	6602

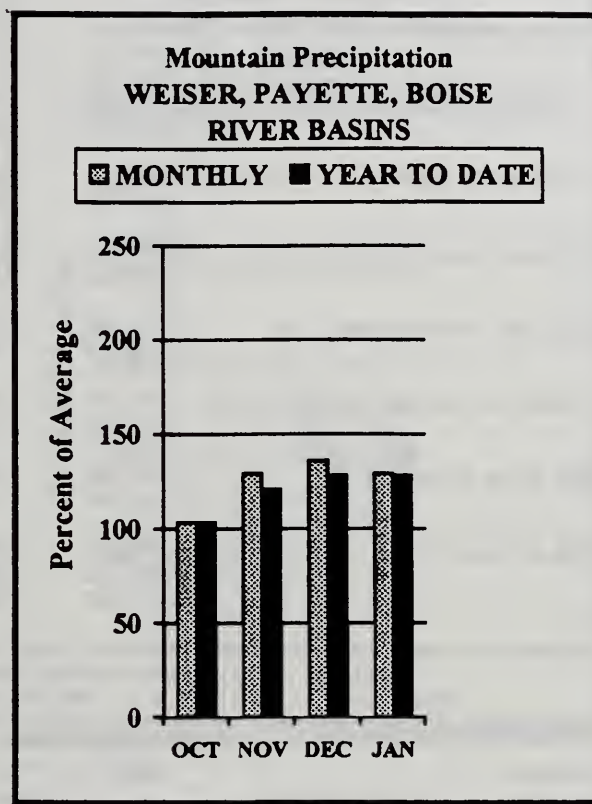
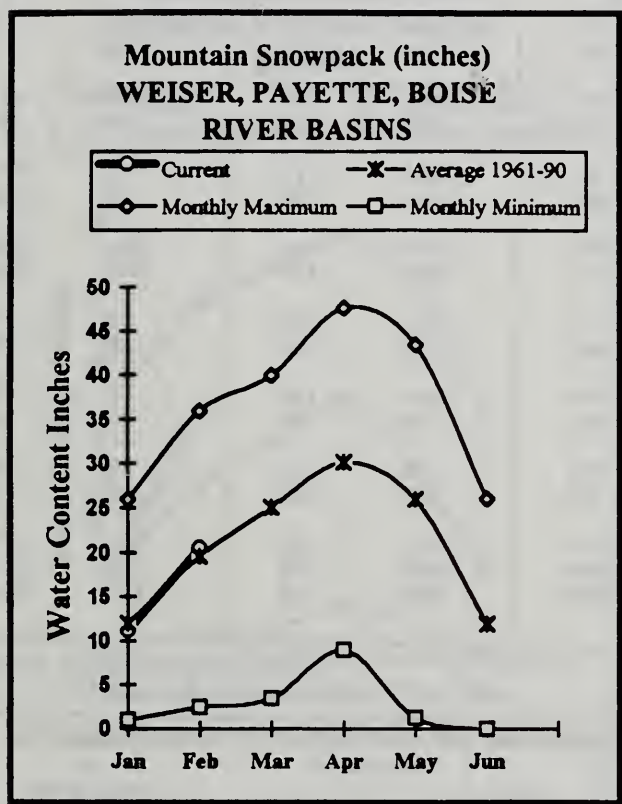
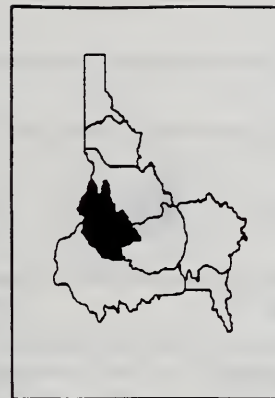
SALMON RIVER BASIN Reservoir Storage (1000 AF) - End of January					SALMON RIVER BASIN Watershed Snowpack Analysis - February 1, 1996			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
					Salmon River ab Salmon	8	114	124
					Lemhi River	4	113	121
					Middle Fork Salmon River	3	100	114
					South Fork Salmon River	3	94	107
					Little Salmon River	4	75	90
					Salmon Basin Total	23	104	114

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
 (2) - The value is natural flow - actual flow may be affected by upstream water management.

WEISER, PAYETTE, BOISE RIVER BASINS FEBRUARY 1, 1996



WATER SUPPLY OUTLOOK

January started out warm and dry, but weather conditions changed drastically in the middle of the month. Heavy snowfall in the second half of January eased many of the recreational and agricultural concerns about lack of snow. January precipitation was 129% of average bringing the water year total to 128%. Most of the middle and high elevation SNOTEL sites in the west central mountains increased by 10.0 or more inches of snow water content during January. In a four day period (January 27-30), Trinity Mountain SNOTEL site received 4.8 inches of snow water content -- about 4 feet of new snow. Snowpacks currently range from 84% of average in the Weiser River to 120% in the South Fork Boise River. Reservoir storage remains above normal in the Boise and Payette basins; additional water releases to maintain room in the reservoirs for flood control are occurring. Streamflow forecasts increased from last month and now call for 128% of average for the Boise River near Boise and 130% for the Payette River near Horseshoe Bend. The Surface Water Supply Index (SWSI), an indicator that combines reservoir storage and projected runoff, reflects the wet conditions and is 1.8 for the Boise basin and 2.8 for the Payette basin. A value of zero for the SWSI indicates median conditions. Water supplies should be more than adequate for all water users in the Weiser, Boise, and Payette basins this year.

WEISER, PAYETTE, BOISE RIVER BASINS
Streamflow Forecasts - February 1, 1996

Forecast Point	Forecast Period	<===== Drier ===== Future Conditions ===== Wetter =====>						30-Yr Avg. (1000AF)
		===== Chance Of Exceeding * =====						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
WEISER nr Weiser (1)	APR-JUL	201	362	435	113	508	669	386
	APR-SEP	219	392	470	113	548	721	415
SF PAYETTE at Lowman	APR-JUL	401	461	502	116	543	603	432
	APR-SEP	446	511	555	114	599	664	488
DEADWOOD RESERVOIR Inflow (1,2)	APR-JUL	132	158	169	125	180	206	135
	APR-SEP	137	164	176	123	188	215	143
NF PAYETTE nr Cascade (1,2)	APR-JUL	479	593	645	130	697	811	496
	APR-SEP	499	624	680	128	736	861	533
NF PAYETTE nr Banks (2)	APR-JUL	679	781	850	131	919	1021	648
	APR-SEP	714	825	900	130	975	1086	690
PAYETTE nr Horseshoe Bend (1,2)	APR-JUL	1633	1954	2100	130	2246	2567	1618
	APR-SEP	1768	2120	2280	130	2440	2792	1755
BOISE near Twin Springs (1,2)	APR-JUL	630	747	800	127	853	970	631
	APR-SEP	736	864	922	134	980	1108	686
SF BOISE at Anderson Rnch Dm (1,2)	APR-JUL	527	639	690	127	741	853	544
	APR-SEP	566	684	738	127	792	910	582
MORES CK nr Arrowrock Dam	APR-JUL	135	156	170	132	184	205	129
	APR-SEP	141	162	177	132	192	213	134
BOISE nr Boise (1,2)	APR-JUN	1297	1516	1615	128	1714	1933	1264
	APR-JUL	1421	1696	1820	128	1944	2219	1421
	APR-SEP	1600	1890	2021	132	2152	2442	1535

WEISER, PAYETTE, BOISE RIVER BASINS
Reservoir Storage (1000 AF) - End of January

WEISER, PAYETTE, BOISE RIVER BASINS
Watershed Snowpack Analysis - February 1, 1996

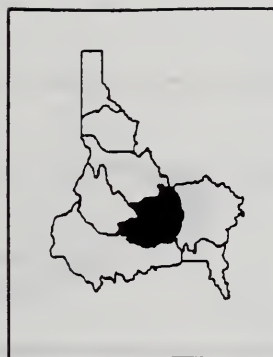
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
MANN CREEK	11.1	5.4	4.5	5.4	Mann Creek	1	56	81
CASCADE	703.2	582.0	377.8	409.4	Weiser River	3	66	84
DEADWOOD	161.9	126.6	54.7	79.5	North Fork Payette	8	85	95
ANDERSON RANCH	464.2	408.4	55.0	300.6	South Fork Payette	4	90	102
ARROWROCK	286.6	230.6	139.3	223.9	Payette Basin Total	13	87	98
LUCKY PEAK	293.2	110.0	65.1	117.4	Middle & North Fork Boise	6	98	111
LAKE LOWELL (DEER FLAT)	177.1	141.3	38.3	131.0	South Fork Boise River	6	107	120
					Mores Creek	4	88	98
					Boise Basin Total	12	98	109
					Canyon Creek	0	0	0

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

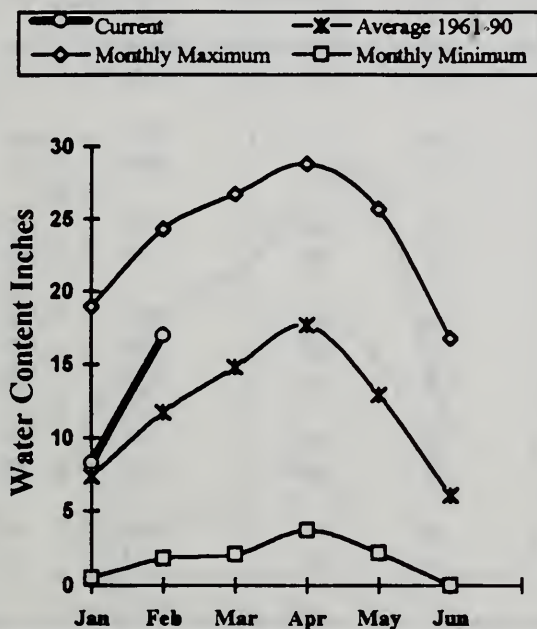
The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
 (2) - The value is natural flow - actual flow may be affected by upstream water management.

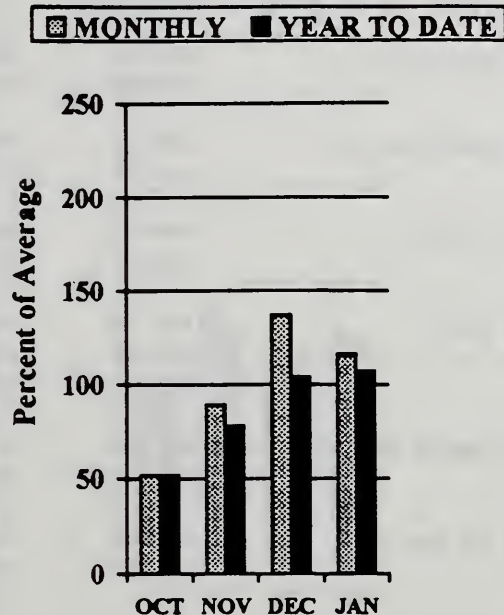
WOOD and LOST RIVER BASINS FEBRUARY 1, 1996



**Mountain Snowpack (inches)
WOOD AND LOST RIVER
BASINS**



**Mountain Precipitation
WOOD AND LOST RIVER
BASINS**



WATER SUPPLY OUTLOOK

January brought plenty of snow to the Wood and Lost basins. Precipitation for the month was 116% of average, bringing the total for the water year to 107%. Snowpack conditions improved from last month and now range from 102% of average for the Big Lost basin to 117% for the Big Wood basin. On February 1, Vienna Mine SNOTEL site had the most snow water content since 1982 -- 30.4 inches (130% of average). Reservoir storage is above average in Magic, Mackay and Little Wood reservoirs. The Big Wood River below Magic Dam forecast calls for 112% of average flow; the Big Lost River below Mackay is expected to yield 102% of average. The Surface Water Supply Index (SWSI), an index of reservoir and projected runoff, indicates an above normal water supply and ranges from 1.0 to 1.6 for these basins. A value of zero for the SWSI indicates median conditions. If the current wet trend continues, water supplies should be more than adequate in the Wood and Lost river basins in 1996.

WOOD AND LOST RIVER BASINS
Streamflow Forecasts - February 1, 1996

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		===== Chance Of Exceeding * =====						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
=====								
BIG WOOD near Hailey (1)	APR-JUL	173	257	286	112	315	465	255
	APR-SEP	217	285	315	109	345	413	289
BIG WOOD near Bellevue	APR-JUL	139	182	212	116	242	285	183
	APR-SEP	152	197	228	116	259	304	197
CAMAS CREEK near Blaine	APR-JUL	100	101	102	100	103	104	102
	APR-SEP	101	102	103	100	104	105	103
BIG WOOD blw Magic Dam (2)	APR-JUL	224	287	329	112	371	434	295
	APR-SEP	239	302	345	111	388	451	310
LITTLE WOOD nr Carey	APR-JUL	69	88	101	109	114	133	92
	APR-SEP	74	94	107	108	121	140	99
BIG LOST at Howell	APR-JUN	97	123	141	100	159	185	141
	APR-JUL	120	156	181	100	206	242	181
	APR-SEP	141	182	210	102	238	279	206
BIG LOST blw Mackay Reservoir (2)	APR-JUL	107	135	153	102	171	199	150
	APR-SEP	137	166	186	102	206	235	182
LITTLE LOST blw Wet Creek	APR-JUL	29	34	37	119	40	45	31
	APR-SEP	37	43	47	121	51	57	39

WOOD AND LOST RIVER BASINS Reservoir Storage (1000 AF) - End of January					WOOD AND LOST RIVER BASINS Watershed Snowpack Analysis - February 1, 1996			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
MAGIC	191.5	145.6	12.6	92.8	Big Wood ab Magic	8	98	117
LITTLE WOOD	30.0	26.5	10.4	15.5	Camas Creek	2	76	102
MACKAY	44.4	38.3	18.7	30.0	Big Wood Basin Total	10	94	115
					Little Wood River	3	76	101
					Fish Creek	0	0	0
					Big Lost River	5	81	102
					Little Lost River	3	92	105

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

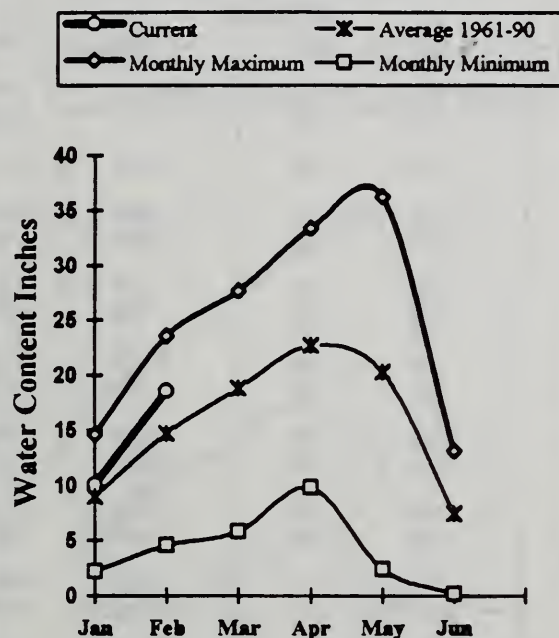
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 (2) - The value is natural flow - actual flow may be affected by upstream water management.

UPPER SNAKE RIVER BASIN

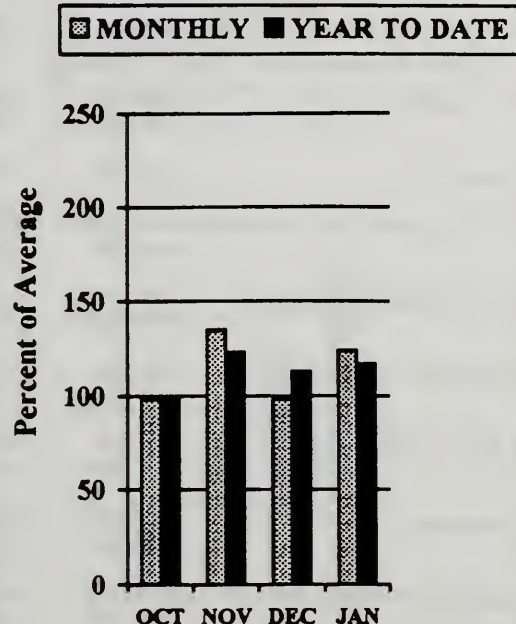
FEBRUARY 1, 1996



Mountain Snowpack (inches)
UPPER SNAKE RIVER BASIN



Mountain Precipitation
UPPER SNAKE RIVER BASIN



WATER SUPPLY OUTLOOK

The month of January brought blizzard like conditions followed by sub-zero temperatures to eastern Idaho. Mountain precipitation was 124% of average for the month, bringing the water year total to 117%. The heavy snowfall in late January was accompanied by high winds causing drifting snow and subsequent road closures. The high elevation drainages above Palisades Reservoir in western Wyoming continue to report the highest snowpack in the entire Snake basin – 130-140% of average. In the Henrys Fork and Teton basins snowpack conditions range from 112-114% of average. Even the low elevation drainages of the Willow, Blackfoot and Portneuf rivers are now reporting above normal snowpack conditions. The combined storage for the eight major reservoirs in the upper Snake is 127% of average which is more than three times last year's storage. Flood control releases may be needed if the wet trend continues. Streamflow forecasts call for above normal runoff throughout the region and range from 100-135% of average. The combination of excellent carry over storage and deep snowpacks will provide more than adequate water supplies this year for the upper Snake basin.

UPPER SNAKE RIVER BASIN
Streamflow Forecasts - February 1, 1996

Forecast Point	Forecast Period	<===== Drier ===== Future Conditions ===== Wetter =====>						30-Yr Avg. (1000AF)
		=====		Chance Of Exceeding *		=====		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
HENRYS FORK nr Ashton (2)	APR-JUL	481	538	577	106	616	673	544
	APR-SEP	649	715	760	104	805	871	730
HENRYS FORK nr Rexburg (2)	APR-JUL	1075	1224	1325	108	1426	1575	1228
	APR-SEP	1342	1514	1630	105	1746	1918	1551
FALLS RIVER nr Squirrel (1,2)	APR-JUL	311	362	385	106	408	459	364
	APR-SEP	365	423	450	104	477	535	432
TETON abv S Leigh Ck nr Driggs	APR-JUL	139	165	183	120	201	227	153
	APR-SEP	185	216	238	120	260	291	199
TETON nr St. Anthony (2)	APR-JUL	292	352	392	105	432	492	375
	APR-SEP	360	427	473	104	519	586	454
SNAKE nr Moran (1,2)	APR-SEP	921	1058	1120	129	1182	1319	869
SNAKE R abv Palisades Rsvr nr Alpine	APR-JUL	2509	2753	2918	128	3083	3327	2286
	APR-SEP	2863	3160	3361	127	3562	3859	2647
GREYS R abv Palisades Reservoir	APR-JUL	352	403	438	132	473	524	333
	APR-SEP	404	461	500	129	539	596	388
SALT abv Reservoir nr Etna	APR-JUL	344	401	440	138	479	536	320
	APR-SEP	437	501	545	136	589	653	400
PALISADES RESV INFLOW (1,2)	APR-JUL	3441	3963	4200	130	4437	4902	3225
	APR-SEP	3976	4556	4820	128	5084	5664	3762
SNAKE nr Heise (2)	APR-JUL	3839	4226	4489	130	4752	5139	3451
	APR-SEP	4429	4876	5180	128	5484	5931	4048
SNAKE nr Blackfoot (1,2)	APR-JUL	4316	5233	5650	127	6067	6984	4444
	APR-SEP	5464	6480	6941	127	7402	8418	5482
PORTNEUF at Topaz	MAR-JUL	70	81	88	102	95	106	86
	MAR-SEP	88	100	109	102	118	130	107
AMERICAN FALLS RESV INFLOW (1,2)	APR-JUL	2721	3697	4140	135	4583	5559	3066
	APR-SEP	2822	3949	4460	135	4971	6098	3303

UPPER SNAKE RIVER BASIN
Reservoir Storage (1000 AF) - End of January

UPPER SNAKE RIVER BASIN
Watershed Snowpack Analysis - February 1, 1996

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
HENRYS LAKE	90.4	87.2	75.2	78.7	Camas-Beaver Creeks	4	48	74
ISLAND PARK	135.2	122.3	86.2	100.7	Henrys Fork River	10	81	112
GRASSY LAKE	15.2	13.1	12.1	10.8	Teton River	8	92	114
JACKSON LAKE	847.0	677.0	389.6	479.6	Snake above Jackson Lake	13	120	132
PALISADES	1400.0	1365.6	458.2	1043.6	Gros Ventre River	3	146	129
RIRIE	80.5	42.5	21.6	39.1	Hoback River	6	177	135
BLACKFOOT	348.7	223.8	108.2	235.8	Greys River	4	155	133
AMERICAN FALLS	1672.6	1448.1	104.3	1141.5	Salt River	5	144	136
					Snake above Palisades	31	135	134
					Willow Creek	7	89	109
					Blackfoot River	4	107	111
					Portneuf River	5	110	120
					Snake abv American Falls	44	126	129

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

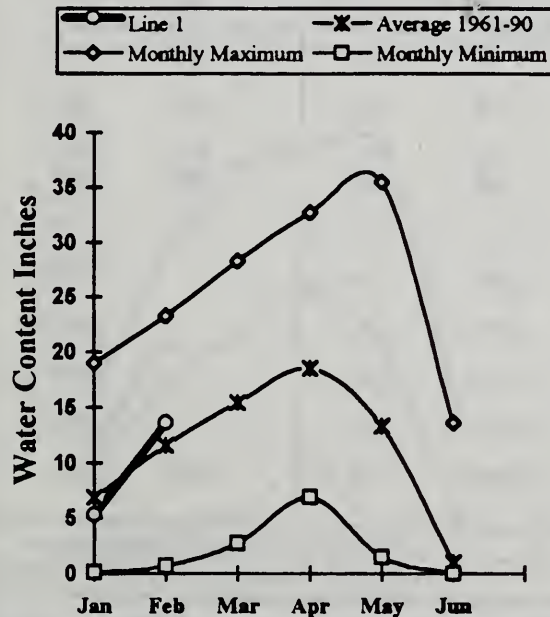
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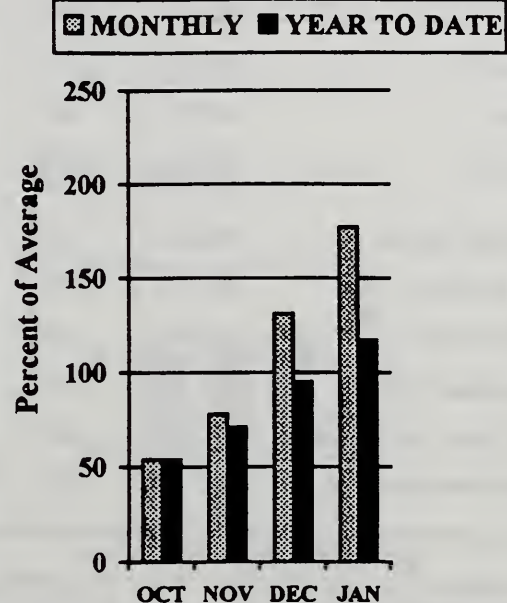
SOUTHSIDE SNAKE RIVER BASINS FEBRUARY 1, 1996



**Mountain Snowpack (inches)
SOUTHSIDE SNAKE RIVER
BASINS**



**Mountain Precipitation
SOUTHSIDE SNAKE RIVER
BASINS**



WATER SUPPLY OUTLOOK

The southern edge of Idaho received almost non-stop snowfall during the last two weeks of January. This area received the heaviest January precipitation in the state -- 177% of average -- with some SNOTEL sites receiving over 200% of normal for the month! Nearly all the SNOTEL sites in this region more than doubled their snow water content from January 1. South Mountain SNOTEL site, at 6,500 feet in the Owyhee basin, received more than 8.0 inches of snow water content from January 15-31. After reporting the lowest snowpack in the state last month, conditions have improved dramatically in the Owyhee basin. Snowpack conditions now range from 112% of average in the Goose-Trapper basins to 135% in the Bruneau basin. Streamflow forecasts have also increased from last month and now range from 95-115% of average. Reservoir storage is near normal or better for Oakley, Salmon Falls, and Owyhee reservoirs. Whitewater boating opportunities now look promising in the Bruneau, Jarbidge and Owyhee rivers. If the wet trend continues, water supplies should be adequate for all users this

SOUTHSIDE SNAKE RIVER BASINS
Streamflow Forecasts - February 1, 1996

Forecast Point	Forecast Period	<===== Drier ===== Future Conditions ===== Wetter =====>						
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
OAKLEY RESERVOIR Inflow (2)	MAR-JUL	22	31	37	108	43	52	34
	MAR-SEP	24	33	40	108	46	56	37
SALMON FALLS CREEK	MAR-JUN	60	80	94	109	110	135	86
	MAR-JUL	64	85	100	109	117	144	92
	MAR-SEP	68	89	105	109	122	150	96
BRUNEAU nr Hot Spring	MAR-JUL	178	235	273	116	311	368	235
	MAR-SEP	180	240	280	114	320	380	246
OWYHEE nr Gold Ck (2)	MAR-JUL	16.2	26	33	97	40	50	34
OWYHEE nr Owyhee (2)	APR-JUL	43	70	88	102	106	133	86
OWYHEE near Rome	FEB-JUL	364	482	572	92	670	827	622
OWYHEE RESV INFLOW	FEB-JUL	502	646	754	115	870	1057	656
	APR-SEP	206	314	400	96	496	657	418
SUCCOR CK nr Jordan Valley	FEB-JUL	3.5	10.6	15.4	95	20	27	16.2
SNAKE RIVER at King Hill (2)	APR-JUL	1100		2280	79		3450	2896
SNAKE RIVER near Murphy (2)	APR-JUL	1160		2400	81		3635	2980
SNAKE RIVER at Weiser (2)	APR-JUL	2840		5700	104		8530	5465
SNAKE RIVER at Hells Canyon Dam	APR-JUL	3250		6290	103		9316	6129
SNAKE blw Lower Granite Dam (1,2)	APR-JUL	13985	20391	23300	108	26209	32615	21650

SOUTHSIDE SNAKE RIVER BASINS
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage ***		
		This Year	Last Year	Avg
OAKLEY	77.4	23.1	9.5	26.5
SALMON FALLS	182.6	52.3	16.6	49.3
WILDHORSE RESERVOIR	71.5	39.2	18.4	31.5
OWYHEE	715.0	526.4	146.9	464.0
BROWNLEE	1419.3	651.9	1292.8	1109.4

SOUTHSIDE SNAKE RIVER BASINS
Watershed Snowpack Analysis - February 1, 1996

Watershed	Number of Data Sites	This Year as % of	
		Last Yr	Average
Raft River	1	128	126
Goose-Trapper Creeks	2	120	112
Salmon Falls Creek	5	112	123
Bruneau River	6	113	135
Owyhee Basin Total	19	84	117

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

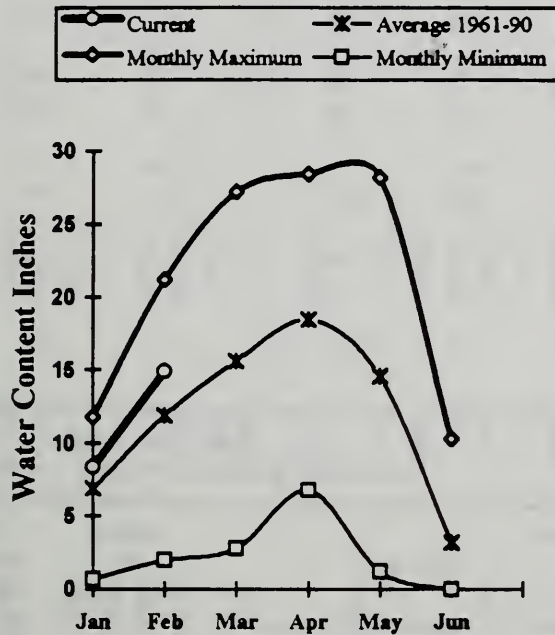
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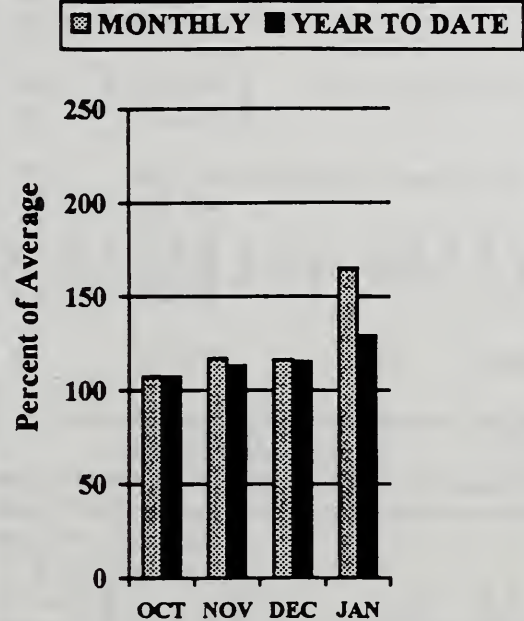
BEAR RIVER BASIN FEBRUARY 1, 1996



**Mountain Snowpack (inches)
BEAR RIVER BASIN**



**Mountain Precipitation
BEAR RIVER BASIN**



WATER SUPPLY OUTLOOK

January brought heavy snowfall to the Bear River basin. Mountain precipitation was 165% of average during January, bringing the water year total to 129%. Snowpack conditions increased substantially from last month, and now range from 123% of average in the Malad watershed to 144% for the Bear River above WY-ID state line. Streamflow forecasts have also increased, and now call for near normal or better runoff across the basin. Bear Lake storage is still only 42% of capacity while Montpelier Creek Reservoir reports 3,200 acre-feet, 80% of capacity. The Surface Water Supply Index (SWSI) for the Bear River basin remains low (-2.5) as a result of the low lake levels. However, this year's spring and summer runoff should provide adequate water supplies for most water users in the basin.

BEAR RIVER BASIN
Streamflow Forecasts - February 1, 1996

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		===== Chance Of Exceeding * =====						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
=====								
BEAR R nr Randolph, UT	APR-JUL	62	105	135	114	165	208	118
	APR-SEP	63	112	145	114	178	227	127
SMITHS FORK nr Border, WY	APR-JUL	89	107	120	118	133	151	102
	APR-SEP	104	125	140	119	155	176	118
THOMAS FK nr WY-ID State Line	APR-JUL	18.8	27	35	106	45	65	33
	APR-SEP	21	30	38	106	48	69	36
BEAR R blw Stewart Dam nr Montpelier	APR-JUL	199	262	305	106	348	411	288
	APR-SEP	230	301	350	107	399	470	327
MONTPELIER CK nr Montpelier (2)	APR-JUL	7.3	9.6	11.5	94	13.8	18.2	12.2
	APR-SEP	8.9	11.4	13.4	94	15.8	20	14.2
CUB R nr Preston	APR-JUL	33	41	47	100	53	61	47

BEAR RIVER BASIN Reservoir Storage (1000 AF) - End of January					BEAR RIVER BASIN Watershed Snowpack Analysis - February 1, 1996			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
WOODRUFF NARROWS	57.3	44.0	8.5	---	Smiths & Thomas Forks	3	163	143
WOODRUFF CREEK	4.0	3.2	2.0	---	Bear River ab WY-ID line	8	162	144
BEAR LAKE	1421.0	591.8	317.5	987.6	Montpelier Creek	2	159	131
MONTPELIER CREEK	4.0	3.2	0.8	1.6	Mink Creek	1	99	101
					Cub River	1	166	162
					Bear River ab ID-UT line	15	150	137
					Malad River	1	99	123

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
 (2) - The value is natural flow - actual flow may be affected by upstream water management.

Southside Snake River Basins

RESERVOIR CAPACITY DEFINITIONS - Different agencies use various definitions when reporting reservoir capacity and contents. Reservoir storage terms include dead, inactive, active, and surcharge storage. The table below lists these volumes for each reservoir in this report, and defines the storage volumes that NRCS uses when reporting capacity and current reservoir storage. In most cases, NRCS reports usable storage, which includes active and inactive storage.

BASIN/ RESERVOIR	DEAD STORAGE	INACTIVE STORAGE	ACTIVE STORAGE	SURCHARGE STORAGE	NRCS CAPACITY	NRCS FIGURES INCLUDE
<u>PANHANDLE REGION</u>						
HUNGRY HORSE	39.73	--	3451.00	--	3451.0	ACTIVE
FLATHEAD LAKE	Unknown	--	1791.00	--	1971.0	ACTIVE
NOXON RAPIDS	Unknown	--	335.00	--	335.0	ACTIVE
PEND OREILLE	406.20	112.40	1042.70	--	1561.3	DEAD + INACTIVE + ACTIVE
COEUR D'ALENE	--	13.50	225.00	--	238.5	INACTIVE + ACTIVE
PRIEST LAKE	20.00	28.00	71.30	--	119.3	DEAD + INACTIVE + ACTIVE
<u>CLEARWATER BASIN</u>						
DWORSHAK	--	1452.00	2007.00	--	3459.0	INACTIVE + ACTIVE
<u>WEISER/BOISE/PAYETTE BASINS</u>						
MANN CREEK	1.61	0.24	11.10	--	11.1	ACTIVE
CASCADE	--	50.00	653.20	--	703.2	INACTIVE + ACTIVE
DEADWOOD	1.50	--	161.90	--	161.9	ACTIVE
ANDERSON RANCH	29.00	41.00	423.18	--	454.2	INACTIVE + ACTIVE
ARROWROCK	--	--	286.60	--	286.6	ACTIVE
LUCKY PEAK	--	28.80	264.40	13.80	293.2	INACTIVE + ACTIVE
LAKE LOWELL	--	8.00	169.10	--	169.1	ACTIVE
<u>WOOD/LOST BASINS</u>						
MAGIC	--	--	191.50	--	191.5	ACTIVE
LITTLE WOOD	--	--	30.00	--	30.0	ACTIVE
MACKAY	0.13	--	44.37	--	44.4	ACTIVE
<u>UPPER SNAKE BASIN</u>						
HENRY'S LAKE	--	--	90.40	--	90.4	ACTIVE
ISLAND PARK	0.40	--	127.30	7.90	135.2	ACTIVE + SURCHARGE
GRASSY LAKE	--	--	15.18	--	15.2	ACTIVE
JACKSON LAKE	--	--	847.00	--	847.0	ACTIVE
PALISADES	44.10	155.50	1200.00	--	1400.0	DEAD + INACTIVE + ACTIVE
RIRIE	4.00	6.00	80.54	10.00	80.5	ACTIVE
BLACKFOOT	--	--	348.73	--	348.7	ACTIVE
AMERICAN FALLS	--	--	1672.60	--	1672.6	ACTIVE
<u>SOUTHSIDE SNAKE BASINS</u>						
OAKLEY	--	--	77.40	--	77.4	ACTIVE
SALMON FALLS	48.00	--	182.65	--	182.6	ACTIVE
WILDHORSE	--	--	71.50	--	71.5	ACTIVE
OWYHEE	406.83	--	715.00	--	715.0	ACTIVE
BROWNLEE	0.45	444.00	975.30	--	1419.3	INACTIVE + ACTIVE
<u>BEAR RIVER BASIN</u>						
WOODRUFF NARROWS	--	1.50	57.30	--	57.3	ACTIVE
WOODRUFF CREEK	--	4.00	4.00	--	4.0	ACTIVE
BEAR LAKE	--	--	1421.00	--	1421.0	ACTIVE
MONTPELIER CREEK	0.21	--	3.84	--	4.0	DEAD + ACTIVE

Bear River Basin

- BEAR R NR RANDOLPH, UT
- + SULPHUR CK RESV (STORAGE CHANGE)
- + CHAPMAN CANAL DIVERSION
- + WOODRUFF NARROWS RESV (STORAGE CHANGE)
- SMITHS FORK NR BORDER, WY - No Corrections
- THOMAS FORK NR WY-ID STATELINE - No Corrections
- BEAR R BLW STEWART DAM, ID
- + SULPHUR CK RESV (STORAGE CHANGE)
- + CHAPMAN CANAL DIVERSION
- + WOODRUFF NARROWS RESV (STORAGE CHANGE)
- + TOTAL OF 12 CANALS
- + WESTFORK CANAL
- + DINGLE INLET CANAL
- + RAINBOW INLET CANAL
- MONTPELIER CK NR MONTPELIER, ID
- + MONTPELIER CK RESV (STORAGE CHANGE)
- CUB R NR PRESTON, ID - No Corrections

Streamflow Adjustment List For All Forecasts Published In Idaho Basin Outlook Report

Streamflow forecasts are projections of runoff volumes that would have occurred naturally without influences from upstream reservoirs or diversions. These values are referred to as natural or adjusted flows. To make these adjustments, changes in reservoir storage, diversions, and interbasin transfers are added or subtracted from the observed (actual) streamflow volumes. The following list documents the adjustments made to each forecast point in this report.

Panhandle River Basins

KOOTENAI R AT LEONIA, ID
+ LAKE KOOCANUSA (STORAGE CHANGE)
CLARK FORK R AT WHITEHORSE RAPIDS, ID
+ HUNGRY HORSE (STORAGE CHANGE)
+ FLATHEAD LAKE (STORAGE CHANGE)
+ NOXON RAPIDS RESV (STORAGE CHANGE)
PEND OREILLE LAKE INFLOW, ID
+ PEND OREILLE R AT NEWPORT, WA
+ HUNGRY HORSE (STORAGE CHANGE)
+ FLATHEAD LAKE (STORAGE CHANGE)
+ NOXON RAPIDS (STORAGE CHANGE)
+ PEND OREILLE LAKE (STORAGE CHANGE)
PRIEST R NR PRIEST R, ID
+ PRIEST LAKE (STORAGE CHANGE)
COEUR D'ALENE R AT ENAVILLE, ID - No Corrections
ST. JOE R AT CALDER, ID - No Corrections
SPOKANE R NR POST FALLS, ID
+ COEUR D'ALENE LAKE (STORAGE CHANGE)
SPOKANE R AT LONG LAKE, ID
+ COEUR D'ALENE LAKE (STORAGE CHANGE)

Clearwater River Basin

CLEARWATER R AT OROFINO, ID - No Corrections
DWORSHAK RESERVOIR INFLOW, ID
+ CLEARWATER R NR PECK, ID
+ DWORSHAK RESV (STORAGE CHANGE)
- CLEARWATER R AT OROFINO, ID
CLEARWATER R AT SPALDING, ID
+ DWORSHAK RESV (STORAGE CHANGE)

Salmon River Basin

SALMON R AT SALMON, ID - No Corrections
SALMON R AT WHITE BIRD, ID - No Corrections

Weiser, Payette, Boise River Basins

WEISER R NR WEISER, ID - No Corrections
SF PAYETTE R AT LOWMAN, ID - No Corrections
DEADWOOD RESERVOIR INFLOW, ID
+ DEADWOOD R BLW DEADWOOD RESV NR LOWMAN
+ DEADWOOD RESV (STORAGE CHANGE)
NF PAYETTE R AT CASCADE, ID
+ CASCADE RESV (STORAGE CHANGE)
NF PAYETTE R NR BANKS, ID
+ CASCADE RESV (STORAGE CHANGE)
PAYETTE R NR HORSESHOE BEND, ID
+ DEADWOOD RESV (STORAGE CHANGE)
+ CASCADE RESV (STORAGE CHANGE)
BOISE R NR TWIN SPRINGS, ID - No Corrections
SF BOISE R AT ANDERSON RANCH DAM, ID
+ ANDERSON RANCH RESV (STORAGE CHANGE)
MORES CK NR ARROWROCK DAM, ID - No Corrections
BOISE R NR BOISE, ID
+ ANDERSON RANCH RESV (STORAGE CHANGE)
+ ARROWROCK RESV (STORAGE CHANGE)
+ LUCKY PEAK RESV (STORAGE CHANGE)

Wood and Lost River Basins

BIG WOOD R AT HAILEY, ID - No Corrections
BIG WOOD R NR BELLEVUE, ID - No Corrections
CAMAS CK NR BLAINE, ID - No Corrections
BIG WOOD R BLW MAGIC DAM NR RICHFIELD, ID
+ MAGIC RESV (STORAGE CHANGE)
LITTLE WOOD R NR CAREY, ID
+ LITTLE WOOD RESV (STORAGE CHANGE)
BIG LOST R AT HOWELL RANCH NR CHILLY, ID - No Corrections
BIG LOST R BLW MACKAY RESV NR MACKAY, ID
+ MACKAY RESV (STORAGE CHANGE)
LITTLE LOST R BLW WET CK NR HOWE, ID - No Corrections

Upper Snake River Basin

HENRYS FORK NR ASHTON, ID
+ HENRYS LAKE (STORAGE CHANGE)
+ ISLAND PARK RESV (STORAGE CHANGE)
HENRYS FORK NR REXBURG, ID
+ HENRYS LAKE (STORAGE CHANGE)
+ ISLAND PARK RESV (STORAGE CHANGE)
+ DIV FM HENRYS FK BTW ASHTON & ST. ANTHONY, ID
+ DIV FM HENRYS FK BTW ST. ANTHONY & REXBURG, ID
+ GRASSY LAKE (STORAGE CHANGE)
FALLS R NR SQUIRREL, ID
+ GRASSY LAKE (STORAGE CHANGE)
TETON R ABV SO LEIGH CK NR DRIGGS, ID - No Corrections
TETON R NR ST. ANTHONY, ID
- CROSS CUT CANAL
+ SUM OF DIVERSIONS ABV GAGE
SNAKE R NR MORAN, WY
+ JACKSON LAKE (STORAGE CHANGE)
PACIFIC CK AT MORAN, WY - No Corrections
SNAKE R ABV PALISADES RESV NR ALPINE, WY
+ JACKSON LAKE (STORAGE CHANGE)
GREYS R ABV PALISADES RESV, WY - No Corrections
SALT R ABV RESV NR ETNA, WY - No Corrections
PALISADES RESERVOIR INFLOW, ID
+ SNAKE R NR IRWIN, ID
+ PALISADES RESV (STORAGE CHANGE)
+ JACKSON LAKE (STORAGE CHANGE)
SNAKE R NR HEISE, ID
+ PALISADES RESV (STORAGE CHANGE)
+ JACKSON LAKE (STORAGE CHANGE)
SNAKE R NR BLACKFOOT, ID
+ PALISADES RESV (STORAGE CHANGE)
+ JACKSON LAKE (STORAGE CHANGE)
+ DIV FM SNAKE R BTW HEISE AND SHELLY GAGES
+ DIV FM SNAKE R BTW SHELLY AND BLACKFT, ID
PORTNEUF R AT TOPAZ, ID - No Corrections
AMERICAN FALLS RESERVOIR INFLOW, ID
+ SNAKE R AT NEELEY, ID
+ AMERICAN FALLS (STORAGE CHANGE)
+ PALISADES RESV (STORAGE CHANGE)
+ JACKSON LAKE (STORAGE CHANGE)

Interpreting Streamflow Forecasts

Introduction

Each month, five forecasts are issued for each forecast point and each forecast period. Unless otherwise specified, all streamflows are for streamflow volumes that would occur naturally without any upstream influences. Water users need to know what the different forecasts represent if they are to use the information correctly when making operational decisions. The following is an explanation of each of the forecasts.

Most Probable (60 Percent Chance of Exceeding) Forecast. This forecast is the best estimate of streamflow volume that can be produced given current conditions and based on the outcome of similar past situations. There is a 50 percent chance that the streamflow volume will exceed this forecast value. There is a 50 percent chance that the streamflow volume will be less than this forecast value.

The most probable forecast will rarely be exactly right, due to errors resulting from future weather conditions and the forecast equation itself. This does not mean that users should not use the most probable forecast: it means that they need to evaluate existing circumstances and determine the amount of risk they are willing to take by accepting this forecast value.

To Decrease the Chance of Having Too Little Water

If users want to make sure there is enough water available for their operations, they might determine that a 50 percent chance of the streamflow volume being lower than the most probable forecast is too much risk to take. To reduce the risk of not having enough water available during the forecast period, users can base their operational decisions on one of the forecasts with a greater chance of being exceeded (or possibly some point in-between). These include:

70 Percent Chance of Exceeding Forecast. There is a 70 percent chance that the streamflow volume will exceed this forecast value. There is a 30 percent chance the streamflow volume will be less than this forecast value.

90 Percent Chance of Exceeding Forecast. There is a 90 percent chance that the streamflow volume will exceed this forecast value. There is a 10 percent chance the streamflow volume will be less than this forecast value.

To Decrease the Chance of Having Too Much Water

If users want to make sure they don't have too much water, they might determine that a 50 percent chance of the streamflow being higher than the most probable forecast is too much of a risk to take. To reduce the risk of having too much water available during the forecast period, users can base their operational decisions on one of the forecasts with a smaller chance of being exceeded. These include:

30 Percent Chance of Exceeding Forecast. There is a 30 percent chance that the streamflow volume will exceed this forecast value. There is a 70 percent chance the streamflow volume will be less than this forecast value.

10 Percent Chance of Exceeding Forecast. There is a 10 percent chance that the streamflow volume will exceed this forecast value. There is a 90 percent chance the streamflow volume will be less than this forecast value.

Using the forecasts - an example

Using the Most Probable Forecast. Using the example forecasts shown below, users can reasonably expect 36,000 acre-feet to flow past the gaging station on the Mary's River newa Deeth between March 1 and July 31.

Using the Higher Exceedance Forecasts. If users anticipate a somewhat drier trend in the future (monthly and seasonal weather outlooks are available from the National Weather Service every two weeks), or if they are operating at a level where an unexpected shortage of water could cause problems, they might want to plan on receiving only 20,000 acre-feet (from the 70 percent chance of exceeding forecast). In seven out of ten years with similar conditions, streamflow volumes will exceed the 20,000 acre-foot forecast.

If users anticipate extremely dry conditions for the remainder of the season, or if they determine the risk of using the 70 percent chance of exceeding forecast is too great, then they might plan on receiving only 5000 acre-feet (from the 90 percent chance of exceeding forecast). Nine out of ten years with similar conditions, streamflow volumes will exceed the 5000 acre-foot forecast.

Using the Lower Exceedance Forecasts. If users expect wetter future conditions, or if the chance that live out of every ten years with similar conditions would produce streamflow volumes greater than 36,000 acre-feet was more than they would like to risk, they might plan on receiving 52,000 acre-feet (from the 30 percent chance of exceeding forecast) to minimize potential flooding problems. Three out of ten years with similar conditions, streamflows will exceed the 52,000 acre-foot forecast.

In years when users expect extremely wet conditions for the remainder of the season and the threat of severe flooding and downstream damage exists, they might choose to use the 76,000 acre-foot (10 percent chance of exceeding) forecast for their water management operations. Streamflow volumes will exceed this level only one year out of ten.

UPPER HUMBOLDT RIVER BASIN													
FORECAST POINT	FORECAST PERIOD	STREAMFLOW FORECASTS											
		← DRIER					FUTURE CONDITIONS → WETTER						
		Chance of Exceeding											
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	30% (1000AF)	10% (1000AF)	25 YR (1000AF)						
MARY'S RIVER nr Deeth	MAR-JUL	5.0	20.0	36	77	52	76	47					
	APR-JUL	8.0	17.0	31	74	45	67	42					
LAMOILLE CREEK nr Lamolle	MAR-JUL	6.0	16.0	24	79	32	43	31					
	APR-JUL	4.0	15.0	22	75	30	41	30					
NR HUMBOLDT RIVER at Devils Gate	MAR-JUL	6.0	12.0	43	73	74	121	59					

For more information concerning streamflow forecasting ask your local NRCS field office for a copy of "A Field Office Guide for Interpreting Streamflow Forecasts".



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